Lecture Notes on:

THE ECONOMIST'S TAKE ON EMPLOYER-PROVIDED HEALTH INSURANCE

Employers play some role on many national health systems, but with varying degrees of involvement in their employees' lives and few if any as direct and intimately as in the United States.

Employers as Passive Tax Collectors: Employers may function merely as a convenient nexus at which to collect the contributions employees make to their health insurance carrier. That nexus is chosen because employers tend to be law abiding and reliable.

The Social health Insurance (SHI) systems of Continental Europe and Latin America, based on private for-profit or non-profit insurance carriers, use employers to that end. The employee informs the employer which carrier he or she has chosen and the employer sends the appropriate premium contribution to that carrier. Usually a fraction (say 20%) of that contribution is taken out of the employees paycheck as an explicit withhold, while the employer ostensibly contribute 80%. In Germany, for example the ratio has been 50:50 for decades. As we shall argue in this lecture, however, economists believe that 100% of the contribution comes out of the employees' take-home pay over the longer haul.

Employers as Sponsors of an Insurance Exchange: An employer might go further than the role described in the previous subsection by organizing for employees the analogue of a farmers' market for health insurance – a so-called Insurance Exchange. The employer's personnel department would make sure that the insurers listed are reputable and even help negotiating the premiums with the insurers.

The employer then could either have the insured pay the whole premium out of their own paychecks (some small enterprises might do this) or, much more typically, split the premium – say, 80% ostensibly paid by the employer and 20% by the employee or, for small companies with low-wage workers, a 50:40 split.

American employers have traditionally functioned that way. Because this is burdensome for employers with few employees, the recently passed *American Care Act of 2010 (the ACA)* provides for state-run health insurance exchanges to which small employers can then refer their employees instead of trying to organize the insurance market for employees themselves. Small employers might even then make some contributions to their employees' premiums.

Employers in Fully Parental Mode: Finally, employers can take on the full role of parents and help employees manage their own health through so-called "wellness programs." This model is gaining popularity in the U.S. although not, to my knowledge, in Europe. Europeans might view wellness programs as a slippery slope toward an invasion of privacy.

In this lecture, we shall <u>not</u> focus on the third model – wellness programs -- although there is a growing body of literature on it.

Instead we shall explore who actually pays the premium a large fraction of which (usually 80%) is said to be contributed by employers. Many business executives, union leaders and legislators, and even many policy analysts, are convinced that the part of the premium paid

by employers on behalf of their employees comes out of profits – that is, from the firm's owners -- and not out of the employees' own fiscal hide.

Economists are convinced that under a regime of reasonably competitive labor markets, the bulk and possible all of employer-paid health insurance premiums, along with most ostensibly employer-paid fringe benefits, are shifted backwards into lower take-home pay of employees. Economists believe that workers and perhaps even many CEOs of business firms suffer from the illusion that shareholders pay for the employer's contribution to health insurance premiums. To the extent this is so, it contributes toward the indifference workers have traditionally shown towards health-care cost inflation. But thread the stunning paper referenced below [1].

Exactly how this works depends on a number of factors which we shall explore below.

I. MODELING THE INCIDENCE OF EMPLOYER-PAID FRINGE BENEFITS

Because the ultimate incidence of the cost of fringe benefits *voluntarily* provided by employers, and of government *mandated*, employer "paid" fringe benefits, is so poorly understood among non-economists, we shall take some time to examine the economist's position on that incidence. These lecture notes are intended to help us along in that inquiry.

Here are the steps economists follow when they explore particular issues with a model:

Step 1: Specify precisely the question you will explore, define the compass of the inquiry, and set forth the assumptions you make to describe the phenomenon to be discussed (here the market for a particular type of labor.)

> Step 2: Describe the *structure* of economic context (here market) to be explored. By that we mean write down the mathematical functions believed to capture the essence of this structure. For example, do we assume linear or non linear functions? We call this the *structural model*, composed of a set of *structural equations*.
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> Step 3: Using this structural model to define what must be true in *equilibrium,* derive from the *structural equations* in their equilibrium state the associated *reduced-form equations*. These equations express each variable of interest determined within the model (we call them *endogenous* variables) as a function of variables whose values are externally determined and just fed into the model (these are called *exogenous* variables).
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> Step 4: Assume changes in one or the other of the *exogenous* variables and used the *reduced-form* equations to predict what will happen to the *endogenous* variables as the model's equilibrium shifts to anew equilibrium, in response to the change in the exogenous variable. Economists call this exercise *"comparative statics."* One can learn quite a bit this way.

In our model here, the endogenous variables will be the total compensation of labor (or, alternatively, the workers' take-home pay) and the level of employment in this labor market. The sole exogenous variable will be the magnitude of the employer's outlays on health insurance for the employees.

Our model will describe the market for one particular type of labor, all with the same skill level. It will be a non-unionized labor market. To keep strictly focused on the issue at hand, we assume that all firms in this market contribute an amount equal H per employee per period to the

[1] David I. Auerbach and Arthur L. Kellermann, "A Decade Of Health Care Cost Growth Has Wiped Out Real Income Gains For An Average US Family" *Health Affairs*, vol. 30 (9): 1630-1636.

employee's health insurance. The employer may also contribute F to yet other fringe benefits. But here we assume F to be zero, to keep things simple.

Furthermore, we abstract from taxes, whose inclusion merely complicates the analysis but does not alter its main message. In the U.S. the total cost to an employer of employing a worker – including the employer's cost of fringe benefits and government mandated contributions to payroll taxes and fringe benefits -- is a tax deductible business expense. On the other hand, the employer's contributions to the employee's health insurance – denoted by symbol H – is not treated as taxable compensation of the employee.

Our interest will be to explore how changes in the employer-paid H will affect the equilibrium cash take-home wage W per employee and the total employment level L in this labor market, other things being equal.

A. Variables and Assumptions

When economists model the labor market, they measure the **quantity** of labor supplied to or demanded in that market by either hours per period or full-time-equivalent (FTE) workers per period, and they measure the **price** of labor as "total compensation."

By total compensation is meant ALL of the firm's outlays for a worker, which means the sum of all of the debits that a firm makes to the PAYROLL EXPENSE account for that employee. This sum includes

1. the worker's **cash take** home pay,

2. any income-, Social Security- or Unemployment Insurance taxes withheld from the worker's paycheck, along with any other items withheld from the paycheck as the worker's contribution to health insurance premiums, pensions, and so on,

3. the mandated contributions that mployers must make on behalf of the employee to Social Security, Medicare and Unemployment Insurance,

4. the employer's contribution to the premiums for the employee's health insurance (hereafter called H), whether voluntarily offered by the employer or mandated by law, and

5. any other fringe benefits (hereafter called F) voluntarily offered by employers to their employees and paid for by the employer.

Our interest then will be to explore only what role the employer's contribution to the employee's health insurance plays in the labor market. Specifically, we seek to understand what that contribution H does to

1. total compensation per worker, i.e., the price of labor paid by employers,

2. the employees' cash take-home pay, and

3. total employment in the labor market

To explore these questions, let us build a simple model of a competitive labor market. In a full blown model, we would use the following notation:

L_d = the number of FTE of a particular skill demanded by employers in this in this labor market

L_s = the number of FTE of a particular skill supplied to employers in this in this labor market

H = the **employers'** monetary contribution to the employee's health insurance, per period

z = the cash equivalent value that employees attach to employer-paid health insurance, per $1 contributed by employers to the employees' health insurance. (This value of z can be less than or more than 1).

F = the outlays **employers** make for other fringe benefits provided to employees and paid for by employers.

r = the cash equivalent value the employee attaches to other employer-paid fringe benefits represented by F, per $1 contributed by employers to the employees other fringe benefits (This value of r can be less than or more than 1).

S = the gross pay per period per worker and shown on his or her pay stub, **prior** to the deduction of taxes and other employee contributions **withheld from the employee's paycheck** to arrive at her or his cash take-home pay. (N.B.: This is the gross amount shown on the employee's pay stub, but one has to add to it the payroll taxes and other fringes (F+H) paid by the employer to get to the employee's total compensation or what economists call the "price of labor" to the hiring firm – see the definition of X below).

D = the income- and payroll taxes and other employee contributions to pensions, health insurance etc. that are withheld from the employee's paycheck to arrive at his or her cash take-home pay W.

W = S – D = the cash **take-home pay** per worker, per period

X = S + F + H, the true **total compensation** paid per worker per period, booked by the employer with debits to the account PAYROLL EXPENSE. (This is the true price of labor to which the employers react in their hiring decisions, i.e., in their labor-demand function).

Y = S + zH + rF, the cash equivalent **value** that the employee imputes to X, the total compensation booked by employers.

Again, in a full blown labor-market model, we would include all of these variables. We would also, as noted, build in the fact that the firm's total compensation of labor, including all fringe benefits offered by the employer are a tax-deductible business expense, which employer-paid premiums for the employees' health insurance are not taxable income to the employees.

To keep matters simple for us, however, we abstract from taxes altogether. Furthermore, we shall assume that employers do not offer employees any other fringe benefits besides employer-paid health insurance (i.e., that **F = 0**), and that nothing is withheld from the employees'

paychecks (i.e., **D = 0),** which means employer pay 100% of the premium for the employees' health insurance.

These assumptions will leave us with the following:

X = W + H, the total compensation booked by the <u>employer</u>, just equal to the sum of take-home pay plus employer paid health insurance.

Y = W + zH , the value the <u>employee</u> imputes to $1 of total comp.

There is no reason why the monetary equivalent value of X should equal the value of Y, because z can be greater than or less than 1, if you think about it.

Usually employers buy a group-health insurance policies for all of their employees in the firm at once and pay one group premium for it. It offers great economies of scale in the procurement of health insurance. We assume that all employees are offered insurance and all take it.

Many larger employers self-insure, that is, they do not buy an insurance policy that makes an insurer bear the risk of providing all promised and needed benefits to employees, but instead assume the risk themselves by setting aside an actuarially estimated pool of funds at the beginning of the year. Insurance companies are then hired merely to administer claims processing. That approach, however, does not alter our analysis. It would still cost employers H per employee.

B. The <u>Structural</u> Model

You will notice that our model has two distinct prices in it: X, the price to which employers react, and Y, the price to which labor reacts. We now must choose for which variable we want to solve the model, X or Y. Once we have solved for one of them, we can always get the other from the relationship X = W + H.

Let us here choose to work the model with W, which we would put on the vertical axis in graphing the model (later).

Employers' Market-Demand-for-Labor Function: In making their hiring decisions, employers react to the total compensation **X,** from which it follows that that the employer's demand for labor is given by the linear demand-for-labor function

[1] $$X = a - bL_d \quad \textbf{or}$$

$$(W + H) = a - bL_d \quad \textbf{or}$$

$$W = a - bL_d - H$$

We see that, with W on the vertical axis, and increase in H by ΔH – perhaps because insurers raised their premiums – will shift down the demand for labor curve by ΔH (see later).

Employees' Market-Supply-of-Labor Function: As noted earlier, we plausibly assume also that prospective workers react to the *cash equivalent* value **Y = W + zH** when they decide whether or not to offer their labor to this market. So the supply-of-labor function will be

[2] $\mathbf{Y = c + dL_s}$ **or**

[2] $\mathbf{Y = (W+zH) = c + dL_s}$ **or**

$$\mathbf{W = c + dL_s - zH}$$

We see that, with W on the vertical axis, and increase in H by ΔH will shift down the labor supply curve down by zΔH. In words, whether or not its shifts down more or less than the demand-for-labor curve depends on how much employees value employer-provided health insurance, that is, it depends on the value of structural parameter z.

Market-Clearing Equilibrium: Equilibrium in this market will be reached when

[3] $\mathbf{L_s = L_d}$

From the demand-for-labor function [1] we can solve for

[1b] $\mathbf{L_d = (1/b)[a - W - H]}$

Similarly, from the supply-of-labor function [2] we can solve for

[2b] $\mathbf{L_s = (1/d)[-c + W + zH]}$

Thus we can express the equilibrium condition [3] also as

[3a] $\mathbf{(1/b)[a - W - H] = (1/d)[-c + W + zH]}$

Together, equations [1], p[2[and [3] -- or their restatements [1a], [2a], and [3a] -- are said to be the *structural* equations of the model, because they describe the *structure* of this labor market.

In this structure, employment (L) and take-home pay (W) are the two variables determined by the model. Economists call them *endogenous* variables. The other variable in the model, H, is given to the model. We call it an *exogenous* variable. Finally, the constants (not variables) a, b, c, d, and z are called "structural parameters." They describe the structure of the model and are assumed to be constant when we manipulated the model. They are not variables, but constants.

To be most helpful, however, we restate this structural model in its so-called *reduced form*. In the reduced form, the equilibrium values of the *endogenous* variables W and L each are expressed as a function of only the *exogenous* variable H and the structural parameters. To obtain these reduced-form equations, we solve the equilibrium condition [3a] for L and W explicitly, using subscript "e" to denote "equilibrium values."

B. The Reduced-Form Model

Thus we can solve equation [3a] for the equilibrium take-home pay $\mathbf{W_e}$ at which this equilibrium condition is met, given the values of the parameters a, b, c, d, and z, and given a value for variable H, as

[4] $$\mathbf{W_e = (bc + ad)/(d + b) - [(d + bz)/(d + b)] H .}$$

By inserting this expression for W_e into the market-demand-for-labor function

[1b] $$\mathbf{L_d = (1/b)[a – W – H]}$$

or, alternatively, into the market-supply-of-labor function for L, that is,

[2b] $$\mathbf{L_s = (1/d)[-c + W +zH]} ,$$

we can solve for the equilibrium employment level L_e as in

[5] $$\mathbf{L_e = (a –c)/(d + b) - [(1 –z)/(d + b)]H}$$

Both equations [4] and [5] are reduced form equations. With them, we can now quite easily explore what a change in H – from 0 to a positive value, or a change by ΔH from an existing value oh H to another value of H – will do to W_e and L_e, the focus of our inquiry.

II. THE FOCUS OF OUR INQUIRY: HOW DOES H AFFECT L AND W?

To explore what impact an employer's contribution to an employee's health insurance (H) will have on the employee's take home pay (W), we perform the following mental exercise.

First, let us assume here that initially employers do not provide health insurance to their workers in this market, which means that H = 0. Let us then calculate what the market-clearing equilibrium take-home pay $\mathbf{W_e}$ and the equilibrium level of employment $\mathbf{L_e}$ would be, where the subscript "e" denotes that these are equilibrium values.

Next, let us make **H** larger than 0 by assuming that employers now do contribute H to their employees' health insurance, either because they chose to do so as a come-on to employees or because government mandated them to do so.

We can then explore how an increase of H from 0 to some positive number will change the employees' take home pay W, after the market has fully adjusted and found a new market-clearing equilibrium. If H goes up by, say, $1, does W fall by $1? Or does it fall by less or more than $1? That is what we would like to discover.

Recall again the *reduced-form equilibrium* equations

[4] $$\mathbf{W_e = (bc + ad)/(d + b) - [(d + bz)/(d + b)] H ,}$$

[5] $$\mathbf{L_e = (a - c)/(d + b) - [(1 - z)/(d + b)]H}$$

To explore how changes in H affect take home pay W and employment level L, we evaluate the equations

[6]) $$\mathbf{\Delta W_e/\Delta H = - (d + bz)/(d + b)}$$

[7] $$\mathbf{\Delta L_e/\Delta H = - (1 - z)/(d + b)}$$

If we used calculus, these equations would be the first, partial derivatives $\delta W_e/\delta H$ and $\delta L_e/\delta H$.

Let us now look at a number of different scenarios, each with a different value of z, the monetary equivalent value employees attach per $1 of contribution (of H) employers make to their health-insurance premium. It turns out that the value of z matters quite a bit in this model.

CASE 1: z = 1, that is, employees view a $1 contribution of by their employer towards the premium for their health-insurance as the full equivalent of $1 in take-home pay.

In that case, $\Delta W_e/\Delta H = 1$, that is, the equilibrium take home pay W falls by H, the size of the employer's contribution to the premium for the employees health insurance. Furthermore, in that case $\Delta L_e/\Delta H = 0$, that is, the level of employment remains unchanged.

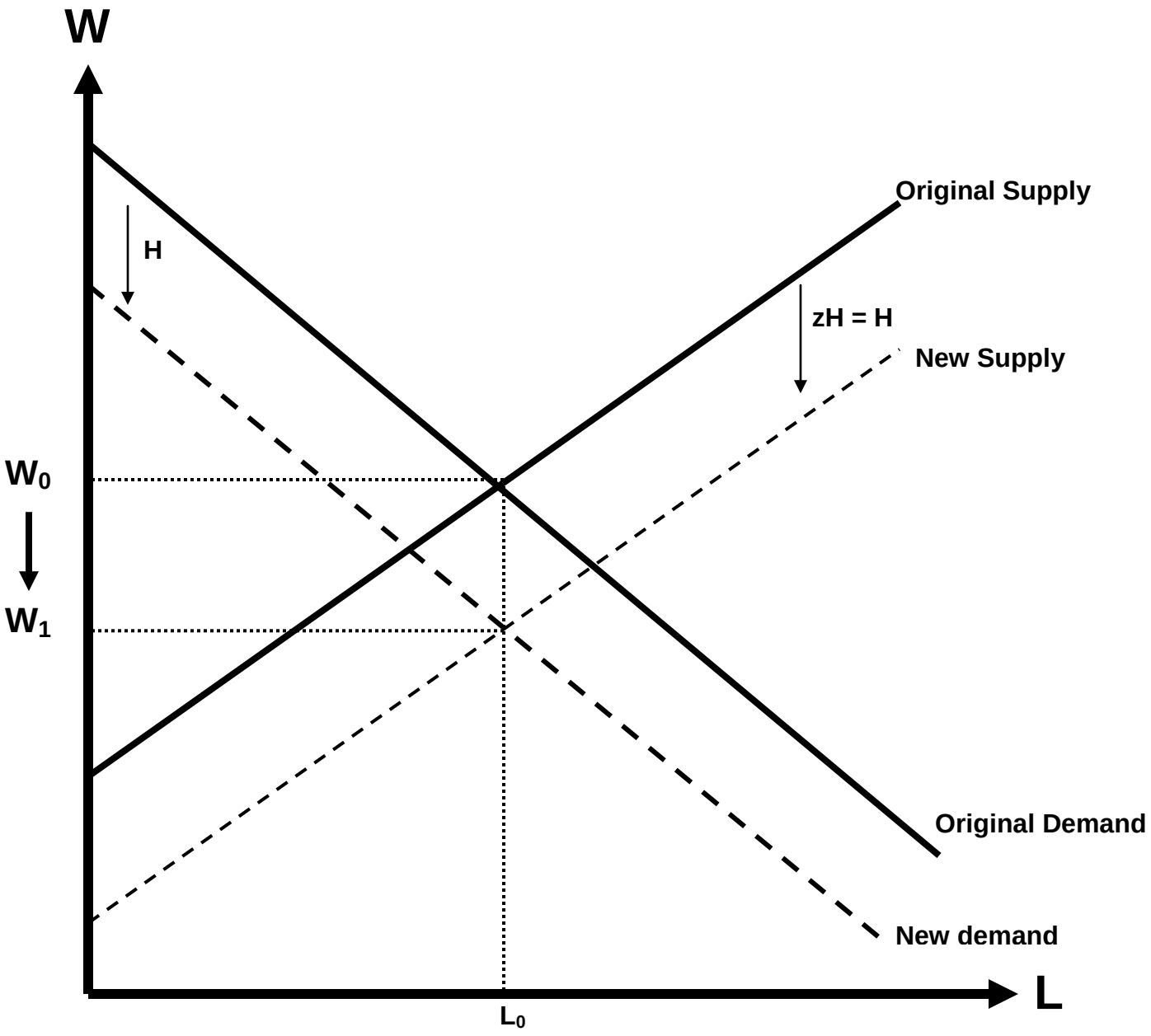
[6a] $$\mathbf{\Delta W_e/\Delta H = - (d + b)/(d + b) = -1}$$

[7a] $$\mathbf{\Delta L_e/\Delta H = - (1 - 1)/(d + b) = 0}$$

In graphical terms (later), the demand- and supply- curves shift down by the same distance and intersect at the same L, although at lower W, with -ΔW equal to the employer's contribution H.

This is the special case of full backward shifting presented in your text. It is also the case economists tacitly assume when they tell policymakers that employer-paid premiums for health insurance are *fully* shifted backwards into wages. Economists are a little bold here in blithely making the assumption that z = 1.

On the next page, we show this solution graphically.



CASE 2: z = 0, that is, employees view a $1 contribution of by their employer towards the premium for their health-insurance as worthless to them.

This extreme and unrealistic case might obtain if an employee already enjoys full health insurance coverage through the policy of a spouse or parent, or is on some government insurance program (e.g., in Canada or, in the U.S. on Medicaid or the Veterans Administrations health program). If all of employees in the market were in that situation, then

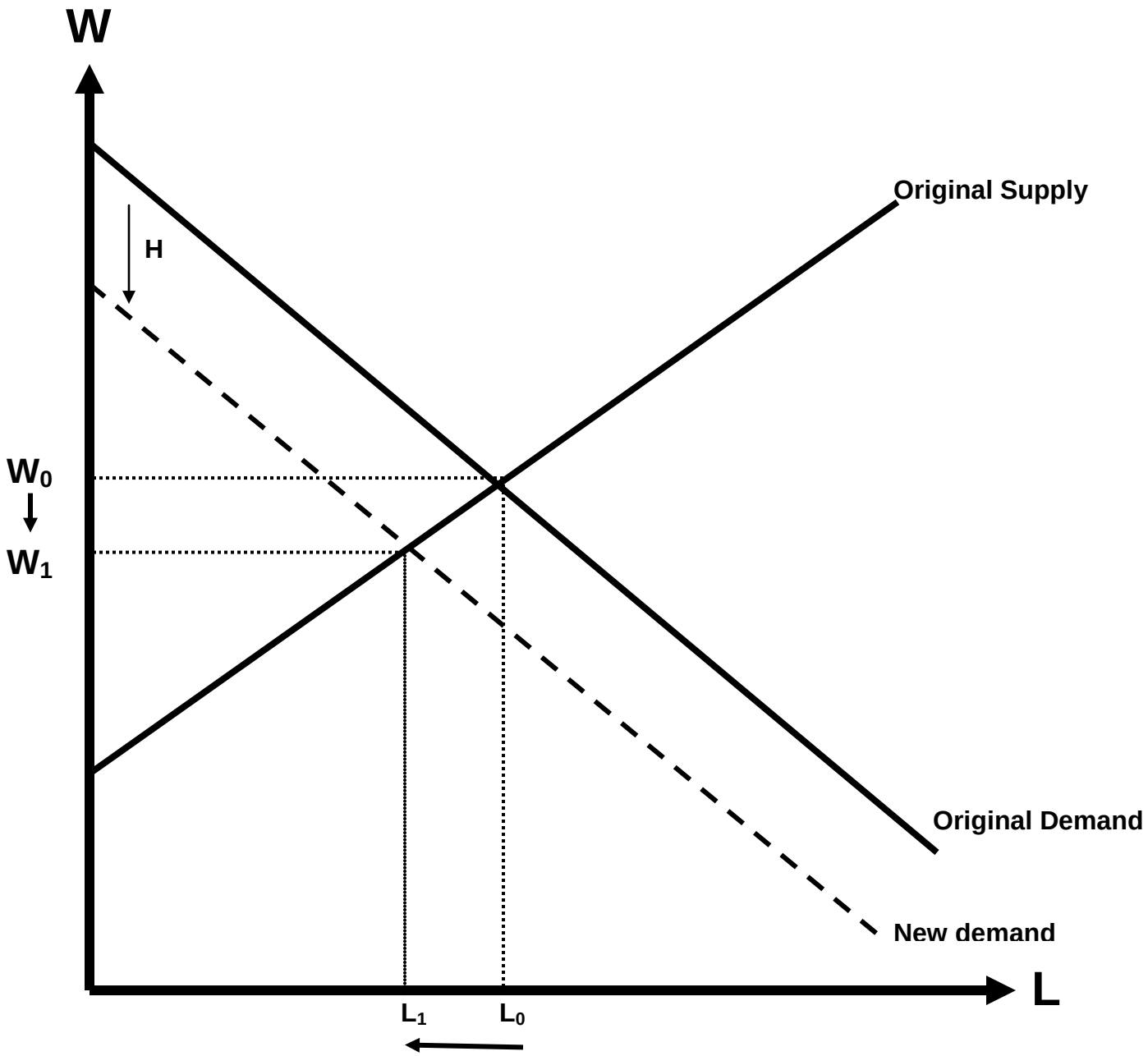
[6c]) $\Delta W_e/\Delta H = -d/(d+b) < 0$

[7c] $\Delta L_e/\Delta H = -1/(d+b) < 0$

In the graph, the labor supply curve would not shift at all in response to changes in H, but the labor demand curve would shift down by H. Both, employment L and take-home pay W would decline in magnitudes that depend on the slopes of the labor demand- and supply curves.

It is not easy, however, to imagine why an employer would offer health insurance in this hypothetical case.

Graphically, this case appears as follows:



CASE 3: 0 < z < 1, that is, employees view a $1 contribution of by their employer towards the premium for their health-insurance as valuable, but not as the full equivalent of $1 in take-home pay W.

In that case,

[6d]) $\Delta W_e/\Delta H = -(d + bz)/(d + b) < 0$

[7d] $\Delta L_e/\Delta H = -(1 - z)/(d + b) < 0$

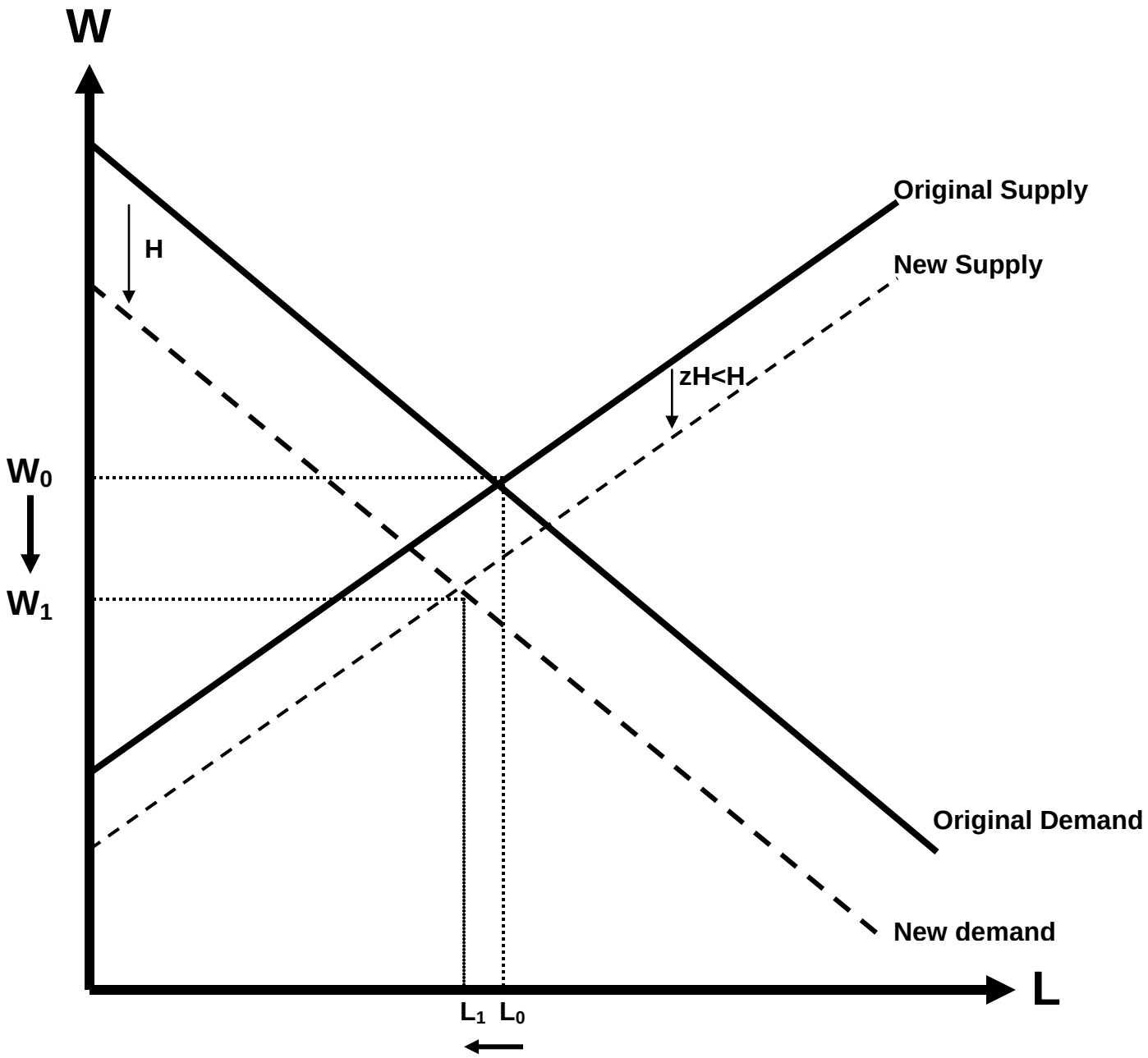
Both take-home pay W and the level of employment L would fall (because employees do not value this fringe benefit quite as much as they value take-home pay).

By how much each variable will fall would depend on the slopes of the labor demand- and supply curves, and also on the value of z. One could **not** blithely testify before Congress, however, that the employer-paid premium is **fully** shifted backwards to employees.

That Case 3 is common may be inferred from the fact that many currently uninsured Americans are being offered health insurance at their place of work but decline it, because they prefer higher take-home pay to insurance coverage, for which they might have to pay a hefty fraction of the total premium in the form of explicit payroll deductions from their paychecks. We see this commonly in small business employing low-wage workers.

Such businesses typically pay much higher premiums for a given benefit package than do large employers, because commissions and other marketing costs can be spread over many more people for large employers. Furthermore, small business firms are “experience rated,” which means that their premiums are based on the average, past health-spending experience of all of the small firm’s employees. If only one among them is seriously ill, it can drive up the premiums for all employees enormously.

Case 3 appears graphically as on the next page.



CASE 4: z > 1, that is, employees value $1 of an employer's contribution towards the premium for their health insurance as more than a $1 of take-home pay.

Could this ever happen? It might, for two reasons.

First, due to their size and experience, employers may be able to procure health insurance coverage for employees on a group-basis on far more advantageous terms than would be available to employees in the non-group (individual) health insurance market. Given that leverage, an employee might be willing to give up more than $1 of take-home pay for an additional $1 of H.

Second, the tax laws may be such as to give employers additional leverage. Traditionally, in this country, health insurance premiums paid by employers could be treated as a tax-deductible business expense, but they did not constitute taxable compensation for the employee. By contrast, individually purchased health insurance outside the employment base had to be financed by employees from after-tax income. (The total federal subsidy towards health insurance implicit in this arrangement exceeds $200 billion now. Furthermore, because of our progressive marginal tax rates, that subsidy benefits high-income employees more than low-income employees.)

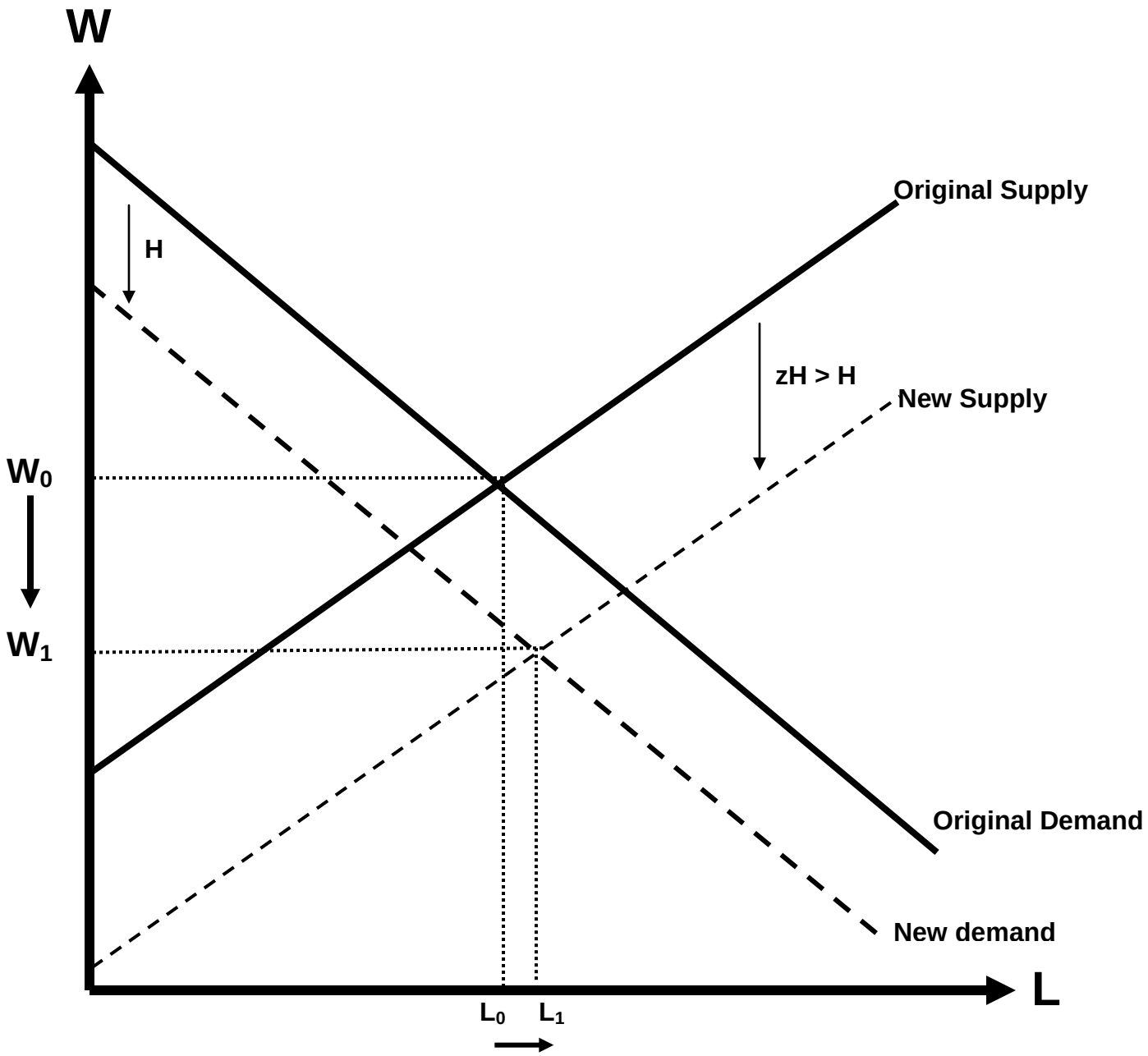
In any event, if z > 1, then

[6e]) $$\mathbf{\Delta W_e/\Delta H = - (d + bz)/(d + b) < 0}$$

[7e] $$\mathbf{\Delta L_e/\Delta H = - (1 - z)/(d + b) > 0}$$

In words, relative to a situation without employer provided insurance (H = 0), if Z > 1 take home pay will fall by more than the value of H while employment L will actually rise, because health insurance in this case is a good “come-on” in the labor market.

The next page shows the graph for this case.


W
Original Supply
H
zH > H
New Supply
W0
W1
Original Demand
New demand
L
L0
L1

III. SOME ODDS AND ENDS

A. *Mandated* fringe benefits

As is mentioned in the text, American business firms may or may not offer their employees health insurance, as a matter of business policy. It is their choice. Usually large firms do. Of smaller firms, fewer than half now do.

When employers offer their employees health insurance on a *voluntary* basis, they presumably do so on the assumption that the bulk of their employees prefer this fringe benefit to take-home pay, for reasons already suggested earlier (especially because the tax preference accorded employment-based insurance made gave employers such leverage in the procurement of health insurance.) Employers will offer health insurance only if, on balance, it is profitable by helping the firm a workforce on favorable terms.

On the other hand, if, as the Clinton Plan of 1994 required, all employers were *mandated* to offer their employees health insurance with at least a stipulated set of coverage benefits (or, as the ACA does, imposes a penalty per employee on firms who do not provider health insurance for their employees), then we should model the health insurance premium per employee as a regular, government-imposed **payroll tax** – specifically, a head tax per employee. We could still use the preceding model, however, to analyze the incidence of this mandate (i.e., how much of it is backward shifted into take-home pay) and to explore its effect on employment.

B. Labor markets with <u>minimum</u> wages

Governments may pass *minimum-wage* laws which provide a wage floor below which employers may not go in paying workers. But labor unions also impose minimum wage constraints on labor markets. We may call them private minimum wage “laws.” Both types of price floors have the same economic effects. For example, the economic effects of union-imposed minimum wages in our model are not different than are those of minimum wage laws.

Graphically we can explore such price floors by drawing the labor supply curve horizontally at the price floor, going right until that horizontal line cuts what the free-market supply curve would have been. From that point on on the horizontal axis, the free market labor supply curve rather than the price floor determines wages, along with the demand for labor.

Convince yourself that if the price floor is binding (the demand curve cuts the labor supply curve in its horizontal segment) when H is, say, 0 (employers do not provide health insurance) and then government or a union contract mandates that employers must spend $H on employer-provided health insurance, the whole effect of that mandate will show up un reduced employment in this labor market, as the workers’ take-home pay cannot absorb any of this shock. Workers still working in the new equilibrium will be better off – their total compensation has increased – while laid off workers will be worse off.

C. Retiree health care

In years past, it was customary – especially for large companies – to promise workers that they would cover medical expenses not paid by the federal Medicare program for the elderly. These private policies were called “wrap-around” policies, because they wrapped around Medicare.

Millions of retired Americans still benefit from those policies, although employers nowadays rarely grant them anymore to new workers. Furthermore, employers usually had fine print in those promises allowing the firms to break whatever promises employees thought their former employer had made to them during their work life. The lesson here is that private employers should not be looked upon as a stable and robust source of retirement security, because (a) these firm’s economic fortunes cannot be predicted in a competitive global market with rapid technological change and (b) in any event, future managements usually can break promises made by earlier managements.

What does retire health care imply for our modeling effort here?

Here we must make a distinction between (a) outlays for earlier promises made to workers already in retirement, and (b) the present value of the projected future cost of retiree health benefits offered now to active workers.

Outlays for retiree health care of already retired workers do not enter the decision on employing new workers now. Therefore we can disregard them in our analysis. They are water under the bridge, so to speak, a “tax burden” that earlier managements imposed on the firm but payable in future years. The auto industry in the Rust belt choked on that very burden.

For new workers, however, the promise of future retiree health benefits, of course, does enter the model. Prior to 1992, American business firms never acknowledged having made these promises in their annual reports to shareholders. In plain English, management lied to shareholders. Under accounting rules imposed in 1992, however, employers now must calculate, in year t, the money it would have to set aside now in an interest-earning fund to support future outlays on retiree health care growing out of the worker’s labor services in year t. Actuaries make these calculations. As you can imagine, they are complex, depending inter alia on the interest rate one assume set aside funds can earn in the future. It may be noted, that employers need only book the cost in year t of promises made in year t. They do not actually have to set aside funds but can instead carry what they owe as an unfunded liability on their balance sheets.

Thus, in terms of our model, a promise made to an active worker to provide future retiree health benefits in year t is a payroll expense in year t and will act just as another fringe benefit. It will shift down the demand-for-labor curve by the current cost of the promise (as in our graphs above).

On the other hand, other things being equal, the promise of retiree health care would shift out (or down, if you wish) the supply of labor curve.

In other words, active workers in year t presumably would be willing to give up some take-home pay in year to in return for promised future retiree health benefits. If, ex post, those promises are then broken by future managements, it turns out to have been an unwise trade-off. That is the chance workers take in trading off cash pay now for promised future benefits.

D. An unsolved problem

The stylized model presented above leaves out one important detail. Usually employers do not purchase health insurance for their employees one-by-one. Instead, they purchase group health-insurance policies that cover all of their workers at once in return for one lump sum premium payment paid by the employer (on top of premium contributions individual employees make for themselves or themselves and their families).

Our question then was how changes in total lump sum for the group-insurance premium paid by the employer are shifted backwards to the take-home pay of individual workers.

We managed to explore this on a “per employee” basis by tacitly making a simplifying assumption, namely, that the firm employs only one type of labor with the identical skill set, so that one worker is a perfect substitute for the other. That assumption allows us to represent the number of full-time equivalent (FTE) workers by just one symbol L. It also allows us to explore how employer paid premiums for group health insurance affects each worker’s take-home pay W.

Firms in the real world employ a rich mix of skill levels. The supply of workers with one skill level may have a quite different **wage elasticity** than the supply of another type of skill level. One might assume, for example, that the supply of workers with a high skill level may have a higher wage elasticity than would the supply of workers with lower skill levels and available in greater abundance.

The question therefore arise how an employer facing supplies of workers with different skill levels and different wage elasticities would shift back the firm’s total outlay on its group-health insurance policy back to individual workers with different wage elasticities in the form of lower take-home pay. When H creases – perhaps because insurance plans have hiked up premiums – more of that increase may be shifted back to workers with a low wage elasticity of supply than to those with a highly wage-elastic labor supply curve.

To my knowledge, this question has not been researched by economists. It is therefore not easy to assess the full incidence of mandated employer-paid health insurance in a granular way.